Zixuan Liang

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Education

Zhejiang University — **Hangzhou, China**
B.Eng. in Electronic & Information Engineering — *09/2011–06/2015*
GPA: 3.89/4.0 Graduated with honors

Work Experience

Lonza — **Visp, Switzerland**
Data Analyst — *05/2018–07/2018*

Responsibilities include developing Master Data management process and maintaining Master Data quality. Built a user-friendly chatbot that is online 24/7 for training new employees and handling SAP request inquiries. Visualized Master Data with interactive dashboard and data charts to help managers make informed decisions. Improved Master Data management process efficiency by developing OCR program to process scanned documents.

RTBAsia — **Shanghai, China**
Software Engineer — *07/2015–12/2017*

Research and development work related to machine learning and deep learning, including model design and optimization for neural networks, transfer learning, feature extraction, stochastic optimization and so on. Built Brand Safety System to protect advertisers on demand-side platforms against websites with inappropriate content such as pornography and terrorism. Trained state-of-the-art convolutional neural networks in face recognition and image classification such as Inception-ResNet achieving 95%+ accuracy. Work demo:

Notable Projects

Hands-On Convolutional Neural Network
An Open-Source Book — *12/2017*

A handbook summarizing my understanding and experience of convolutional neural networks. My goal of writing this handbook is to share it with the community and help others train better deep learning models. PDF:

Image Captioning in Chinese
AI Challenger Global Competition — *12/2017*

Automatically generate captions in Chinese to describe images based on Neuraltalk2 and PyTorch (code:). Improvement compared to Neuraltalk2 includes: train-validation-test splitting technique, preprocessed features, ResNet architecture and ensemble models. Ranked 3rd on the test dataset. Demo:

SLAM-Based 3D Reconstruction
Bachelor's Thesis — *09/2014-05/2015*

Rebuilt the 3D models of the scene by inputting a series of RGB-D images, including point cloud generation, frames mapping and 3D point fusion. Based on C/C++, OpenCV and OpenGL, the core data structure and algorithms contain kD-tree, and SVD-based or Linear Approximation-based ICP. Thesis overview:

Protein Particle Picking with Convolutional Neural Networks
Research program in MiNI Lab at UC Davis — *07/2014-08/2014*

Used convolutional neural networks to classify protein particles on micrographs to help speed up the process of 3D model construction of protein. Program certificate:

- **Object Tracking in Sports Fields**
  Project in CAD&CG Lab at ZJU *03/2014-05/2014*
  Designed evaluating methods to make a benchmark on the current algorithms for object tracking in computer vision, including CSK, Struck, TLD and SCM. Paper:
- **3D Face Modeling Based on 2D Pictures**
  Project in CAD&CG Lab at ZJU *09/2013-03/2014*
  Implemented a mobile APP to reconstruct 3D human from 2D pictures of front face. Based on "Active Shape Model" and the method from "A Morphable Model for the Synthesis of 3D Faces" .
- **Using Networks to Measure Influence and Impact**
  Interdisciplinary Contest in Modeling 2014 *02/2014*
  Design a new network model for analyzing influence and impact in research networks and other areas of society. Measure accuracy of the new model with other existing evaluation tools like Science Citation Index, H-factor, Eigenfactor, etc. Received Honorable Mention award. Certificate: Paper:

Interests

Image Processing, Computer Vision, Machine Learning, Data Science

Skills

- **Programming:** Python, JavaScript, Java, C++, C#, SQL, Ruby
- **Research Tools:** scikit-learn, TensorFlow, PyTorch, OpenCV, OpenGL, D3.js, Git, LaTex
- **Languages:** Chinese (native), English

Awards

Certificates

- Outstanding Graduates of Zhejiang University (2015) (5%)
- National Endeavor Scholarship (2012, 2013, 2014) (3%)
- Scholarship for Excellence in Research and Innovation (2014)
- Merit Student Scholarship (2012, 2013, 2014)
- Honorable Mention, Interdisciplinary Contest in Modeling (2014)

References

Contact information available upon request

- Margaretha Liechti, HR Business Partner Corporate Functions at Lonza
- Tianhong Gu, Research Scientist at RTBAsia
- Yingying Yao, Professor at College of Electrical Engineering, Zhejiang University